Sullivan Engineering Inc.

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January 29, 2004

Conservation Commission
Town of Nantucket
37 Washington Street
Nantucket, MA. 02554

RE: SE48-1665/ Great Harbor Yacht Club

Dear Commissioners,

We would like to take this opportunity to respond to the concerns over the proposed project raised by the Town Biologist in her letter dated January 9, 2004.

1. Sediments:

The sediment samples, which were collected by us, and tested by Groundwater Analytical were composited to adequately represent the material to be dredged, in accordance with the Massachusetts Department of Environmental Protection protocols. Based on the analyses of the samples, the material is classified by DEP as **Category One** (314 CMR 9.07 (3)) **Type A** (314 CMR 9.07 (4)). Material which falls under these classifications is considered to be clean sand.

Although small traces of some heavy metals were found, the amounts were diminimus, and do not trigger any of DEP's review thresholds .

Our findings on the physical characteristics of the sediments are supported by the testing performed by ENSR as part of the Eelgrass And Shellfish Assessment, and by the observations made by the Town of Nantucket Shellfish Biologist during dives conducted to verify that Assessment.

The Department of Environmental Protection considers the clean sand associated with this project to be suitable for hydraulic or mechanical dredging and disposal, and placement of the clean sand is typically only restricted from open ocean disposal at low energy, salty sites (314 CMR 9.07 (5)).

Concerns over increased concentrations of heavy metals in the water column, and resuspension of fine silts and clay are unfounded.

2. Eelgrass:

The proposed project was designed to minimize impacts to the eelgrass.

By centering the design around the existing channel, which contains little to no eelgrass, the impacts associated with the floats and dredging are minimal. Less than 12% of the footprint of the structures, and less than 8% of the dredge footprint are located in areas containing greater than 35% eelgrass coverage. It is our opinion that the amount of eelgrass directly disturbed by the floats and dredging is minimal.

Since the dredge spoil is clean sand, there will be no significant negative indirect impacts to the adjacent eelgrass, salt marsh, or creek ecosystem associated with resuspension of fines from the dredging.

This site has historically been an active marina and mooring field. There is no evidence showing that the project, which proposes to more efficiently use this water sheet, will have significant negative impacts on the eelgrass in the surrounding areas.

3. Shellfish:

To protect the shellfish from any direct negative impacts resulting from the construction, we would propose to relocate any shellfish found on site prior to beginning work.

There will be no alteration in the water quality, and as such, no indirect negative impacts to the shellfish, or shellfish habitat caused by water quality issues.

The bottom conditions post dredging will remain suitable shellfish habitat.

4. Water Quality:

The project as proposed will not have negative impacts on the water quality.

As explained above, the dredge spoil associated with this project consists of clean sand, and concerns over resuspension of contaminated sediments caused by the dredging are unfounded. Also unfounded is the conclusion that increased boat activity will decrease water quality by resuspending bottom sediments. Since adequate water depth is provided for the boats, and since the bottom consists of sand, the bottom sediments will not be resuspended by boat activity.

The proposed fuel service is located at the far end of the floating docks for navigational and safety issues. The samples, which we took in the immediate vicinity of the existing fuel dock, showed no signs of Trace Metals or Extractable Petroleum Hydrocarbons. As such, there is no reasonable conclusion that the proposed location for the fuel service will have negative impacts on the water quality.

5. Circulation:

The proposed project will not affect the volume of water that flows into and out of the area, as this value is solely dependant on the cycle of the tide. The minor decrease in cross sectional area associated with the proposed pilings, floats, and boats (approximately 5%) will not act as a dam, or to prevent the flow of water. The decrease in cross sectional area will actually slightly increase the velocity at which the water flows through the area. However small, this increase in velocity reduces the potential for the area to become a settling basin, which could smother the eelgrass.

6. Finfish:

The proposed dredging and jetting of the piles will be performed between November 15 and January 15, which will eliminate the potential direct negative impacts to the winter flounder or other finfish.

There will be no alteration in the water quality, and as such, no indirect negative impacts to the finfish, or finfish habitat caused by water quality issues.

The bottom conditions post dredging will remain suitable finfish habitat.

7. Lights:

There is no lighting proposed that would shine directly into the water column. The proposed lighting is to be low level lighting that would be directed downward directly onto the floats.

If you have any questions, please feel free to call.

Very truly yours,

John O'Dea, EIT
Sullivan Engineering Inc.

Cc: Great Harbor Yacht Club
Sara Alger, Esq.
Blackwell & Associates, Inc.
ENSR